

BIBLIOGRAPHICAL NOTICES.

The Great Atlas Moth of Asia (*Attacus atlas*, Linn.), with a coloured Plate of its Transformations. By PHILIP HENRY GOSSE, F.R.S. 8vo. London: West, Newman, & Co. 1879.

IN this little book that veteran naturalist Mr. Gosse gives a short account of his experience in rearing the larvæ of the great tale-spotted Atlas moth of South-eastern Asia. The species is one of those silk producing Bombyces to which attention has been of late years directed in consequence of the fatal diseases which have attacked the common silkworm; and, according to Mr. Frederick Moore, it is from its cocoons that the Tusseh silk of China is obtained. In this country, at any rate, the cultivation of *Attacus atlas* would seem to be attended with considerable difficulties; for out of eighty larvæ Mr. Gosse only succeeded in bringing one to what would appear to be the mature stage (after five moults); but even this did not spin up. The author gives a detailed description of the larvæ in their various stages up to the sixth, as just mentioned, when they are large handsome caterpillars of a general delicate pale green tint, and adorned along the back with numerous spini-form processes; and he completes his account of the transformations by describing the cocoon and pupa from a specimen imported in that state. Coloured figures are given of the eggs and larvæ (the latter in their first, fourth, and sixth stages), and of the pupa and cocoon. The remarks on the natural history of the insect, and the details of its author's proceedings in his attempt to rear the larvæ, contained in this little work will prove both interesting and useful to all who devote their attention to this branch of entomology.

Supplement to the Second Edition of 'Acadian Geology,' &c. By J. W. DAWSON, M.A., LL.D., F.R.S., &c. 8vo, 102 pp. Macmillan and Co., London &c., 1878.

THIS Supplement, containing additional facts as to the geological structure, fossil remains, and mineral resources of Nova Scotia, New Brunswick, and Prince-Edward Island, constitutes an appendix of new matter for the Third Edition of the 'Acadian Geology,' the Second Edition of which we noticed as a most satisfactory and useful work in 1868.

Principal Dawson, of McGill University, Montreal, collecting together all the important facts illustrative of the geological structure of the Dominion, long ago worked out not only a local natural history, but a cosmopolitan view of his great subject, and elucidated it with knowledge obtained from every source available to geologist, mineralogist, and naturalist.

Still collecting and comparing facts and opinions, the author has much to add about the strata, fossils, and mineral productions, very little to retract as to hypothetical views in matters of dispute, and much to enforce in corroboration of his views of modified uniformitarianism, glacialization of a mixed character, the origin and nature

of the coal-growths, the existence of a *Devonian* flora, and the occurrence of fossils in the Lower Palæozoic rocks. His comparison of the old rocks of the Canadian regions with those of other parts of the world, in the Table at p. 92, is very interesting and suggestive. From the Ludlow beds downwards to the older gneisses of Scotland and Scandinavia, including the lately recognized Pebidian and Dimetian series, Dr. Dawson finds probable equivalents, of definite characters and position, in Canada and its vicinity.

The new edition of his work, with its well-considered additions, will prove to be valuable to the increasing population of British America, in the presence of the enlightenment of modern education, and the necessity of understanding the nature and whereabouts of the mineral productions of the rocks and the capabilities of the soil.

The Gault, being the Substance of a Lecture delivered in the Woodwardian Museum, Cambridge, 1878, and before the Geologists' Association, 1879. By F. G. HILTON PRICE, F.G.S. 8vo, 81 pp. Taylor and Francis, London, 1879.

IN this very useful history of the Cretaceous division of strata known as "the Gault," the author gives a special description of the Gault at Folkstone, bed by bed (pp. 10-23); a more general account of this formation as seen at the exposures along its outcrop in the various counties from Kent to Devonshire and Yorkshire (pp. 24-34); and a sketch of the Gault in France (pp. 34-42). The Greensand of Blackdown, the "Red Chalk" of Norfolk and Yorkshire, the various phosphatic and other nodular beds, and the results of the deep borings penetrating the Gault near London are specially noticed. An extensive and synoptical catalogue of the fossils (pp. 44-81) shows their occurrence at different localities and their range through the several zones of the Gault.

Besides thus indicating the geographical range of this important formation in England and France, and correlating the equivalents of the eleven zones which he recognizes in the Gault of Copt Point, Folkestone, the author has in view a hydrographical sketch of the area in which this important Cretaceous formation was deposited (pp. 8, 9). He notes that its composition varies much in different localities, according to the depth of water and the nature of the adjacent lands at the time of the deposition of its component parts; also that the fauna varied in the several regions according to the nature and conditions of change in the water and sea-bed. Further, he observes that the clays and sands of the Gault originated in the trituration of lands and cliffs composed, for the most part, of Jurassic and Neocomian rocks in what is now England, on the west side of the Anglo-Parisian Cretaceous basin, of Primary (Palæozoic) rocks in the north-east of the basin at the Ardennes, and of granites, porphyries, Jurassic, and Neocomian rocks on the east and south-west sides of the basin.

A careful list of books and memoirs treating of the Gault and its fossils is given at pp. 1-7.